

### **REMARKS**

By the present Amendment, dependent claims 8 and 9 have been added based on the description provided in the specification such as the second full paragraph of page 11. In addition, independent claims 1 and 4 have been amended to include the order of reaction of the polyester type resin (A2), the epoxy group containing styrene type resin (B2) and the polyisocyanate (D2) consistent with the description provided in the specification such as on page 15, lines 18-24. As explained in paragraph 2. on page 19, the reaction of the carboxyl group within the polyester type resin (A2) and the epoxy group of the epoxy group containing styrene type resin (B2) first occurs and the hydroxy group generated by this reaction is then further reacted with the polyisocyanate. In this manner, the polyester unit is grafted to the styrene backbone via the epoxy group of the styrene type resin and the polyisocyanate promotes crosslinking. Such reaction order with the reactants having the defined characteristics can suppress the water-absorbing properties of the resulting binder resin and therefore improve the performance thereof as illustrated in various examples provided in the specification.

The amendments to the claims clearly distinguish the cited prior art of record, particularly JP 2000-029247. The '247 publication describes a toner binder which is a combination of a polycondensation resin (A) and other resin (B) in order to obtain a defined dielectric tangent satisfying a defined relationship. The polycondensation resin (A) can be any of a variety of resins set forth in paragraph [0005] which includes polyester, polyamide, polyurethane, polycarbonate, polyesteramide, polyesterurethane, etc. The other resin (B) is described in paragraph [0013] and can again be a variety of different resins many of which are not styrene type resins. Even if a polyesterurethane is selected as the polycondensation resin (A) and a

styrene type resin is selected as the other resin (B), the '247 publication does not meet the claims of record. As discussed above, the specific reaction order provides a polymer structure that can contribute to the advantageous results that can be obtained in accordance with the present invention. In contrast, since the polyester and polyisocyanate are first reacted to form the polyesterurethane and then the other resin (B) is reacted, both of the polyester and styrene residues form the polymer backbone.

Hattori, U.S. Patent No. 5,665,510, does not remedy the deficiencies of the '247 publication. Hattori relates to a toner for electrophotography which contains a binder resin having a low softening point so that the toner can be fixed at a low temperature. The binder resin is a resin having an epoxy group such as the resin obtained by the reaction of bisphenol A and epichlorohydrin or an acrylic resin having an epoxy group as discussed in the paragraph starting at column 2, line 40. The resin having an epoxy group is not an epoxy group containing styrene resin, as recited in the claims. Indeed, while a styrene resin may be present, it is added as a styrene-(meth)acrylate copolymer as set forth in the paragraph beginning at column 3, line 17. Furthermore, the section relating to the epoxy equivalent number in the paragraph beginning at column 3, line 66 refers to the entire binder resin and not the epoxy group containing styrene type resin (B2) as defined in the claims of record. It is also noted that Hattori does not recognize that the claimed epoxy equivalent range in combination with the other defined characteristics of the defined reactants enables a resin have offset resistance properties, fixing properties, viscosity and environmental stability that can be obtained in accordance with the present invention which have been shown in the illustrative Examples provided in the specification, as discussed in the prior Amendment.

Even if the teachings of Hattori can be combined with those of the '247 publication, it still would not result in the present invention. As explained above, the recited sequence of reaction is important in obtaining a structure that is not met by the '247 publication and the additional reliance on Hattori to show the epoxy equivalent number would not alter this important distinction. The same point is true with regard to the additional reliance on Nakanishi et al., U.S. Patent No. 6,992,150, which has been cited to teach a polyester resin with a glass transition temperature of 30 to 80°C. Even assuming that this further reliance on Nakanishi et al. is justified, it still would not lead to the presently claimed invention as defined in the claims now of record.

For all the reasons provided above, applicants respectfully submit that the cited prior art does not disclose or suggest the invention as defined in the claims of record and therefore request reconsideration and allowance of the present application.

Should the Examiner wish to discuss any aspect of the present application, he is invited to contact the undersigned attorney at the number provided below.

Respectfully submitted,

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